

A Lack of Security or a Lack of Capital?  
Acculturative Conservatism in Immigrant Naming

by

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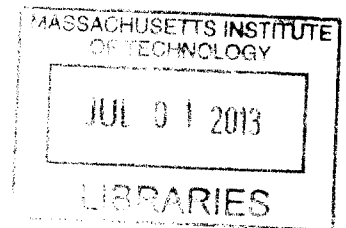
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## Acculturative Conservatism in Immigrant Naming

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### ABSTRACT

Recent research on immigrant naming demonstrates a market tendency towards “acculturative conservatism,” whereby immigrants select given names for their children that were highly popular in an earlier generation of the native population. Acculturative conservatism can potentially be explained as an attempt to address immigrants’ feelings of insecurity by favoring cultural practices that most clearly convey the national identity. However, a more straightforward interpretation is that immigrants lack the necessary cultural capital to know which cultural practices are fashionable. In this paper, we first show that acculturative conservatism is a significant social force by examining how it lowered the rate of change in the fashion of given names between 1880 and 1920 in the United States. Second, we develop a novel analytic strategy to distinguish the effects of a lack of security and those of a lack of cultural capital. Our data include the English names of the early male children of Jewish immigrants who immigrated to America between 1880 and 1920, and the male names of the mainstream in the same period. By applying our analytic strategy, we find that Jewish immigrants tend to select among the formerly popular English names by favoring those whose popularity was still rising and to avoid those that were declining in the native population. This suggests that Jewish immigrants had considerable knowledge of the latest fashions, but deliberately chose older names that would convey their national identity more strongly and thereby address their feelings of insecurity.

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## Introduction

In many countries, the cultural integration of the foreign-born population is a key objective for policy makers and social scientists. Acculturation, represented by the reduction of ethnic distinction in cultural practices between host and immigrant groups, is an important dimension of the cultural integration of immigrants (Gordon, 1964; Gans, 1997; Alba and Nee, 2003). In this paper we focus on an important process in acculturation: immigrants voluntarily adopt the typical practices of the host culture<sup>1</sup>. Different from assimilation in economic, social and political realms that requires the consent of the dominant group, acculturation mainly depends on immigrants' desire and capacity (Spiro, 1955; Gans, 1997). But, it would be puzzling if immigrants act in a way that marked them as immigrants, even when immigrants clearly want to acculturate.

Such a puzzle is the focus of this paper. In particular, we seek to shed light on the phenomenon of "acculturative conservatism," as demonstrated in an emerging line of research on immigrant parents' choices of given names for their children. Naming patterns are receiving increasing attention in research, as naming is not influenced by economic or social mobility and thus it reflects pure taste (Lieberson, 2000). This research finds that immigrants tend to choose given names that are popular in the native population, thus reflecting their desire to acculturate, but they are distinguished from their native contemporaries in that they tend to make more "conservative" choices. In particular, some studies find that immigrant parents tend to give their babies old names of the native culture (Watkins and London, 1994); others add that immigrants adopt popular names of the native culture, but their choices of popular names lag much behind

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<sup>1</sup> It is noteworthy that when immigrants become indistinguishable from the natives in cultural practices, it doesn't mean that immigrants also completely drop their ethnic identity. Ethnic identity at this stage is mainly related to the consumption of symbols, as an extra identity (besides the national identity) or an occasion for nostalgia (Steward, 1964). Identification with the national group and with ethnic groups are not mutually exclusive, and expressing of the different identity depends on the contexts (Eisenstadi, 1953; Glaser, 1958; Glaser and Moynihan, 1963; Berry, 2001; Rudmin, 2003).

the mainstream' choices (Lieberson, 2000; Sue and Telles, 2007). A question is raised by these results: insofar as they wish to acculturate with the mainstream, why are immigrants so conservative?

One explanation for acculturative conservatism is that immigrants feel insecure in their membership in host society, and this feeling of insecurity prevents them from choosing fashionable cultural practices. Immigrants confront both internal and external conflicts about the culture to which they belong (Park, 1928; Eisenstadt, 1953). As their national identity is as evident as the native's, when they want to show their alignment with the host culture, they choose the practices that convey the identity of the host culture most strongly. Since practices that were popular in the past have built up a stock in the population and are familiar to people, all things being equal they will signal national identity more clearly than newly popular names. Therefore, immigrants are more inclined to choose older, popular names than are natives who are more apt to select names that have recently become more popular. Such a subtle but powerful explanation of immigrant conservatism has an important implication for cultural integration. In particular, this would indicate that even when immigrants want to acculturate, and choose an appropriate cultural form, they do so in a way that still marks them as immigrants. And the critical barrier is that newcomers need to feel secure enough as members of the society to engage in behavior that does not clearly signal their membership.

But while this explanation is appealing, it is very difficult to rule out a very straightforward, alternative explanation: immigrants lack cultural capital (Bourdieu, 1984) in the host country, and they therefore lack the knowledge of the latest fashion. In particular, it is possible that immigrants adopt old names because they are more likely to be exposed to formerly popular names of the host culture due to the stock that the old names have built. In other words,

more people in population have formerly popular names than newly popular ones, thus formerly popular ones are more visible for immigrants; moreover, adults are more visible than children, so the names of the former are more visible than those of the later. The effects of cultural capital is hard to separate from those of feelings of insecurity because, first, in general the two predict the same direction of assimilation: when immigrants' economic attainment and social interaction with the natives are improved, their knowledge about the host society will increase, and their feelings of insecurity are also to some extent relieved in the same process. As a result, it is possible that lack (or gain) of knowledge is the single reason involved, as it is more likely to be directly observed than feelings of insecurity. Moreover, previous research focus on examining the relationship between either micro or macro level (or both) variables which reflect immigrants' economic, educational, and social conditions and the degree of assimilation, rather than clarifying the mechanisms; as a result, the effects of "feelings of insecurity" are masked by those of "cultural capital".

The main objective of this paper is to separate the two mechanisms in the context of naming patterns. Our main contribution comes from a novel analytic strategy. Based on the idea that parents are sensitive to names' trends because the trend has symbolic meaning: rising trend indicates latest fashion while falling trends indicates the former fashion (Lieberson, 2000; Berger and Le Mens, 2009;), we identify whether the name was "rising" or "falling" in fashion at the time when immigrants pick it. We develop such a strategy because, according to Lieberson (2000), if a person has the knowledge of fashion, she will adopt the rising rather than falling practices to be fashionable. So if immigrants don't have the knowledge of the latest fashion, they should be less able to distinguish the rising from the falling practices than their mainstream contemporaries. However, if immigrants have the knowledge of fashion, but feel insecurity in

membership, they will adopt the rising practices, but compared with the natives, they will choose the relatively older ones, because older ones are more familiar to audiences as conveying the national identity.

[Table 1 is inserted here.]

To apply this strategy, we compare the names adopted by immigrants with those adopted by the mainstream contemporaries. Our immigrant data are the first names of Jewish soldiers who participated in the US Armed Force in World War II. These Jewish soldiers were born around 1920, right after the great waves of immigration from 1880 to 1920 in American history. We choose the Jewish population because Jewish parents used traditional, Hebrew names to express ethnic identity--e.g. when they feel obliged to honor ancestors or want to send the message that they are not exiting ethnic community. Therefore when they use English names, they are free from the “cake of custom” (Park, 1928, p.881). This limits the possibility in our case that names function as ethnic maintenance (Gerhards and Hans, 2009; Sue and Telles, 2007). Our data of the mainstream names is from a large dataset which contains the American male and female top one thousand popular names for every year since 1880. These two samples are compared by multiple, improved methods based on previous research (Watkins and London, 1994; Lieberman, 2000; Sue and Telles, 2007).

Our results indicate that Jewish immigrants adopted “rising, old” names in the whole population, and at the same time we find that they avoid the formerly novel names which rise in rank lately. This result suggests that immigrants actually have a good knowledge of fashion. This shows that they were navigating the culture in a sophisticated manner, but felt insecure to act on the knowledge.



The rest of the paper is organized as follows. In the next section, we show that “acculturative conservatism” had significant effects on the pattern of the change in fashion in the United States during the early 20<sup>th</sup> Century. Then, we then review that cultural capital and feelings of insecurity are both possible explanations for “acculturative conservatism”, and we show why it is difficult to separate one from the other. We then propose our solution for separating them. The next section demonstrates analyses and results. We conclude by drawing lessons that feelings of insecurity affects immigrants’ acculturation, even when immigrants have cultural capital; therefore, achieving cultural integration requires promoting participants’ feelings of being accepted as social members.

### **Acculturative conservatism as significant social force**

A single immigrant’s conservative choice may have a trivial impact on the surrounding environment; but, as a characteristic of overall immigrant groups, “acculturative conservatism” is a potentially significant social force that can change the picture of cultural change.

In particular, consider the rate of change in the fashion of names in the United States over the 20<sup>th</sup> century. Figure 1 indicates there was a slowdown of replacement in the mainstream names around 1920<sup>2</sup>. Such a dip is surprising, because according to Lieberman (2000), the rate of change in fashion has been steadily increasing since around the middle of the eighteenth century in all major western countries. Before that time, the rate of change was very low. This is because in traditional era people had homogenous, constant taste for names; there was no fashion in names in traditional era. The increase of the rate of change indicates the transition from traditional to modern society. In modern society, with the rise of individualism, people

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<sup>2</sup> Lieberman (2000) and Lieberman and Lynn (2003) didn’t show the dip. We find two problems in Lieberman’s measurement of name turnover and we improve the measurement. The improved measurement leads us to find the dip. The details are demonstrated in Appendix A.

demonstrate differentiated tastes, leading the changes in dominant cultural forms (Durkheim, 1984[1893]; Coser, 1991; Bellah et al 1985; Simmel, 1950, 1972). The dip of the rate of change around 1920 in America, however, creates a surprising image that the “traditional era” came back at that time in America.

[Figure 1 is inserted here.]

The timing of the dip suggests that it may be caused by the great waves of immigrants rushing into America at that period. Between 1880 and 1920, a great amount of immigrants who were mainly from South, Eastern and Central (SEC) Europe entered America (Abbott, 1917; Karp, 1977; Kessner, 1977; Lieberman, 1980; Laxton, 1997; Alexander, 2009; Vigdor, 2010). These immigrants generally pursued acculturation (Abbott, 1917); as in naming, they dropped their original name and replaced it with an “American” one (Lieberman, 2000). However, although they widely adopted the typical American names, these immigrants slowed down the fashion in names due to their conservative choices of old names.

To explain how immigrants’ conservative choices slowed down fashion, let’s first clarify how fashion is formed. Fashion is represented by the replacement of dominant cultural forms. Lieberman (2000) demonstrates a compelling way to depict how fashion is formed, based on the assumption that people have specific tastes for popularity, regardless of the concrete features of cultural practices. In modern society, people’s various tastes for popularity constitute a distribution, which ranges from favoring unpopular things to favoring extreme popular things. The fashion is formed through the following process: first, persons who have a taste for uniqueness adopt novel practices. Their adoption makes the practices slightly more popular. Then these practices are adopted by the persons who like slightly more popular things. Such a process goes on, and eventually the names become very popular. Meanwhile persons who like

novelty abandon their previous choices and introduce new practices into the population. As this process repeats, on the macro-level, we observe endless changes in fashion.

One possible explanation for the slowdown of the change in fashion was that it was led by a wide-ranging decline of the desire to differentiate among the population, due to the change in external environment. Such a process is depicted by Obukhova, Zuckerman and Zhang (2011). In extreme case, if nobody wants to differentiate, fashion will completely stop (Simmel, 1957). But evidence suggests this is not the reason for this case, because the rate of the change in fashion of more top names (e.g. top 20) doesn't demonstrate any dip around 1920 (Figure 2). This suggests there was not a wide tendency that differentiation declines in the population. The slowdown of the change in fashion around the early twentieth century in America was caused by the influx of immigrants, who chose conservative cultural practices

[Figure 2 is inserted here.]

An alternative explanation is that, within the process of fashion, if people prefer older forms rather than the new ones in the course of rising, their preference will hold back the decline of old ones and also hinder the rise of new ones. As a result, the rate of replacement in the popular cultural forms is slowed down. To demonstrate such an effect, we develop a simple computational model based on the model in Obukhova, Zuckerman and Zhang (2011). In the model we compare the rate of fashion change in two conditions: in condition one, actors adopt and abandon practices according to the Lieberman (2000)'s depiction that we introduce above, i.e. an actor chooses the practice whose level of popularity is closest to the actor's taste for popularity; in condition two, based on the rules in condition one, partial actors (e.g. 10%) choose practices from a narrowed set: the practices which have reached a certain level of popularity (e.g. >5%) for a rather long term (e.g. 3 periods). The results are shown in Figure 3.

[Figure 3 is inserted here.]

In sum, “acculturative conservatism” of immigrants is a significant social force which affected the cultural development in American history. Then, what accounts for immigrants’ “acculturative conservatism”?

### **Cultural capital vs. feelings of insecurity**

One straightforward explanation for “acculturative conservatism” is that immigrants lack “cultural capital” in the host society. As we will show, it confounds the effects of feelings of insecurity that this paper highlights.

Consider the immigrants who moved from Southern, Eastern and Central Europe to America around the beginning of the twentieth century. These immigrants had little cultural capital relevant to the new country upon arrival. As a result, natives often called them “greenhorn”, who are inexperienced newcomers “ignorant of the customs and laws of the country, often unable to speak the language”, and “more liable by reason of their 'outlandish ' dress and manners to meet ridicule” (Abbott, 1917, p.14). Their early jobs were typically labor work, e.g. women worked in hotel or restaurant service, or in cotton, woolen and leather factories, and men worked in mining or construction industry. They mainly worked in ethnically-homogenous workplaces and lived in ethnic community with their countrymen who migrated from the same country, and thus lacked direct contacts with the mainstream society. These immigrants were largely ignorant of the host culture.

Even the immigrants who achieved some degree of success and moved out of the ethnic economy still lacked cultural capital in the new social situations. They felt “green again”—awkward and out of place--when face new values and customs attached with the new social situation. Such a phenomenon even became a popular theme in vaudeville and plays at that time,

which made fun of the misbehavior of newly rich immigrants (Williams, 2002). As in a comic strip “*Bring up father*” which was first launched in 1913, Jiggs, an immigrant, is asked by his wife to express appreciation to the hostess of a high-toned party, and Jiggs says: “We’ve had such a good time I think we’ll go before it kills us”. When asked to have more tea, Jiggs says: “No thanks—I’ve had four saucer-fulls already” (Williams, 2002).

While we have plausible reasons to believe that immigrants lack cultural capital in their new homeland, we also have reasons to expect that immigrants, especially those who had the aspirations towards entrance into the mainstream society and experienced some degree of upward social mobility, felt insecure in their social positions. For instance, the predicament of “feeling green again” is not just relevant to lacking of cultural capital; it is actually a mix of lacking cultural capital and feelings of insecurity. Feelings of insecurity might be particularly compelling at the stage when immigrants were entering into the mainstream; because though they were more economic stable than before, they face more social uncertainty about their social positions. On the one hand, the immigrants who were upwardly moving tried to separate themselves from their former working classing fellows, but their feeling of belonging to the ethnic community had not been completely eliminated; on the other hand, they were also not completely accepted by the natives (Eisenstadt, 1952; Park, 1928). As Eisenstadt (1953, p.170) points out, the performance of stable roles of immigrants in institutional spheres (e.g. family, economic, political, etc.) and in their relations to other groups had not been established in the mind of both immigrants themselves and the natives. As a result, the immigrants’ identity was naturally ambiguous (because people believe that potentially immigrants can choose to either align with their ethnic groups or with the host society). Therefore, immigrants chose to emphasize the host-culture identity, when they wanted to demonstrate their alignment with the

host culture. As “lace curtain” was considered as conveying immigrants’ newly gained middle-class status, old American names reflected immigrants’ tendency to overly claim the mainstream identity that they wanted to obtain. They demonstrate a taste for stably high popularity that is a signal of legitimated practices (Lieberson, 2000; Obukhova, Zuckerman and Zhang, 2011).

Furthermore, the immigrants who didn’t achieve successful social mobility and kept living in ethnic communities had the same choice of older, popular names as those who had moved out, though for somewhat different reasons. First, these immigrants were more likely to know the older names, since these names were possibly owned by the native adults whom they encountered in their workplaces. Second, the seemingly isolated ethnic communities were actually *not* impenetrable by host culture. In the relatively long run, these ethnic communities were gradually acculturated (Glazer, 1950; Gans, 1992, 1997). We can imagine that, the host culture was diffused to ethnic communities through the residents who had some contacts with the host society, and the diffusion went from the persons who had more contacts to the ones who had fewer. But the immigrants, if wanted to show to their fellows that they were aligned with host culture, probably wouldn’t adopt the latest practices of the host culture even if they know what the latest were, because not every immigrant had the equal knowledge of the host culture. For most immigrants, the optimal choice to adopt the native practices was to use the ones which could be recognized as a typical mainstream one by almost everyone. Older, popular names served well for such a purpose. In a word, when they wanted to show that their association with the host culture, immigrants had the concern that their national identity was not self-evident. Such feelings were intertwined with their lacking of cultural capital in the same processes and contexts as we demonstrate above. It is therefore especially difficult to separate the two apart. The existing research rarely separates the two factors; in particular, they generally assume that

increased social integration, i.e. more chances for immigrants to interact with the native, will increase acculturation. Although in general this could be true, it overlooks the tensions involved in the interaction between immigrants and the natives. It is possible some of immigrants' behaviors, which seemingly reflect their lacking of knowledge, are actually their intentional choices due to feelings of insecurity. Furthermore, feelings of insecurity were not necessarily eliminated with the increase of immigrants' cultural capital; in contrast, they could last for a long time if immigrants didn't feel fulfilled and satisfied as either an ethnic member (because ethnic identity impede their social mobility) or a national member (because of social prejudice) (Eisenstadt, 1953). Therefore, we aim to contribute to disentangle the two factors in this paper.

### **Separating the two mechanisms**

We propose the following strategy to separate the two factors: according to Lieberman (2000)(Lieberman, 2000, p. 93-97), in order to be fashionable, people choose the rising names and avoid the falling ones, as "rising" ones indicate today's and even tomorrow's fashion while falling ones indicate the dated fashion (Lieberman, 2000). However, if a person doesn't have the knowledge of latest fashion, she will not be able to distinguish the rising from the falling. As for immigrants, if their knowledge about the popular names is out of date, they will probably use the old names which include both rising and falling names. However, if immigrants have the knowledge of the latest fashion but feel insecure about their membership, the ideal choices for them are old names but which are not falling, so as to ensure the membership as well as to be fashionable as far as possible. The difference between immigrants who have the knowledge and the mainstream is that the mainstream is more inclined to new, rising names but immigrants are more inclined to old, rising names (Table 1). If we found the evidence that immigrants, compared with the natives, adopt old, rising names, we will show that immigrants' conservative

choices of names are the consequence of their feelings of insecurity, rather than lack of cultural capital.

### **Jewish immigrants and their naming patterns**

We use Jewish immigrants who entered into America around the early twentieth century and their naming patterns as our strategic research site. We did this for several reasons. First, because the unacculturated was largely prevented from social mobility in America (Spiro, 1955), and because Jewish immigrants rarely planned to leave America due to persecution, it is reasonable that Jewish immigrants had strong desire to acculturate (Kessner, 1977). Existing literatures verify this and show that Jewish immigrants did acculturate—they became culturally indistinguishable from other Americans in substantial cultural practices; and they also went through the process of acculturation at a faster rate than other ethnic groups (Glazer, 1950; Russell, 1955; Rosenthal, 1960; Kessner, 1977; Gans, 1997)<sup>3</sup>.

Second, most Jewish males have two names: a religious name and a secular name (Blatt, 1998, 2004). The religious name is a Hebrew name. After immigration to a new country, a new secular name was chosen in the secular language of the new country. For instance, among the Jews of Eastern Europe, Yiddish was the everyday or secular language, so they had a religious Hebrew name and a secular Yiddish name. And American Jews have a religious Hebrew name and a secular English name. The secular name appears in civil document and the Hebrew name

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<sup>3</sup> We should clarify that the acculturation of the first and second generations of Jewish immigrants was slightly different from that of the later generations. The first and second generations of Jewish immigrants eagerly pursued acculturation (and also assimilation in economic, social and political spheres). Many of them even tried to hide their Jewish identity (Rosenthal, 1960; Wirth, 1956[1928]; Cohen, 1983). However, the self-consciousness of Jewishness re-emerged among the third and later generations due to various economic, social and political factors, including, for instance, prejudice from the outside society and Jewish immigrants' seeking of better economic condition and higher social/political status (Wirth, 1956[1928]; Etzioni, 1959; Rosenthal, 1960). It goes far beyond this paper's scope to discuss the reasons for the re-emergence of Jewish identity; but it is noteworthy that ethnic identification among third and later generations was basically symbolic, which doesn't necessarily mean the preservation of ethnic cultural practices (Steward, 1964; Gans, 1992; 1997). It also didn't exclude the identification with the larger, national group at the same time (Berry, 2001; Rudmin, 2003). Nevertheless, we focus on the acculturation of early generations (mainly first and second generations) of Jewish immigrants.



in general only appears in connection with Jewish religious observances, e.g. in the record of birth, marriage contract and tombstone. Such a naming system provides particular advantage for our research, because ethnic identity was expressed through Hebrew names and Jewish parents were almost free to choose the English names that they like. When they choose English names, the Jewish parents, similar to the parents of many other ethnic groups, often use the English equivalent names of the babies' Hebrew names as the babies' new English names, or choose new names based on the similarity of sound or meaning (Blatt, 2004).

## **Data**

Our data of the names of Jewish population are from the book-- "*American Jews in World War II: The story of 550,000 Fighters for Freedom*", which is compiled by the Bureau of War Records of the National Jewish Welfare Board (Dublin and Kohs, 1947). From 1942 to 1946, this organization tried to make the most complete records of Jewish servicemen/women who participated in armed forces directly or worked in army service activities. The advantage of these records is that they were made under strict standard of authentication: all records were sent to the local communities to check background. This book contains an Honor Roll which includes the names of Jewish servicemen/women who died in the service, who were wounded in action and who won awards in World War II. These names, which are organized in states where the men/women were originally from, are the source of our data.

As this book contains really a great amount of names, we only process part of them. We choose the male names<sup>4</sup> of three states: Virginia, Illinois and California, which are geographically distributed in eastern, middle and western America respectively, and contain both urban and rural areas. Although at the early time of the twentieth century a great number of

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<sup>4</sup> Female names are very few in the records, so we focus on male names.

Jewish people lived in New York (Kessner, 1977), we did not choose New York because its records are less reliable since many people in New York City could not be traced by local communities (Dublin and Kohs, 1947). In total, we obtained 3910 persons' 410 different first names. To test our assumption that these soldiers' are born during 1915-1920, we randomly extract a sample (size=213) of the persons' full names, and search them through Mormon Church Genealogy to get these persons' birth years. We identified 74 persons through the Mormon Church Genealogy. Our statistical results show that the mean and median of the soldiers' birth year are 1917 and 1918, respectively, and the standard deviation is 5.87.

Our data of national names are from *Social Security Administration (SSA)* of the United States. For every year from 1880, SSA publishes on its website<sup>5</sup> the top one thousand first names of both the male and the female in the United States, with the percentage of population who use the name. The data are considered as the authoritative records which reflect the national naming trend (Berger and Le Mens, 2009; Twenge, Abebe and Campbell, 2010).

## **Analysis and Results**

Previous studies suggest that immigrants lagged behind the mainstream in adoption of popular names (Watkins and London, 1994; Lieberman, 2000; Sue and Telles, 2007). We first test whether the same phenomenon exists in our case. Our result is consistent with the previous finding. Figure 4 shows the number of the same names between Jewish World War II soldiers who were born around 1920 and the people in whole population who were born in each year from 1880 to 1960.

[Figure 4 is inserted here.]

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<sup>5</sup> <http://www.ssa.gov/OACT/babynames/>

In figure 4, each bar at a specific year indicates the number of names used by both Jewish soldiers who were born around 1920 and the general population who were born in that year. The solid line is the trend-line ( $y=bx+a$ ) of the number of the same names between 1880 and 1920. The coefficient of the linear fitting is  $-.037$ . T test of the coefficient ( $t=-3.45$  and  $p<0.001$ ) shows the decline in the number of the same names between 1880 and 1920 is significant. Similarly, the dashed line is the trend-line of the number of the same names between 1880 and 1960. The coefficient of the linear fitting is  $-.070$  and  $t=-18.42$  ( $p<0.000$ ). Figure 4 shows that the top 20 names of Jewish soldiers most overlapped with the top 20 names of national population born in early 1880s, and they overlapped less with those of the national population born around 1920s, who were in the same cohort as the Jewish soldiers. At the same time, they overlapped least with those of the national population born in 1950s and 1960s. The decline of the overlap is significant. Such a result supports the argument that mainstream preceded Jewish immigrants in adopting fashionable names.

Next, according to our analytical strategy, we use national population as the benchmark, and examine whether Jewish immigrants, compared with the national population, demonstrate a higher tendency to use declining names rather than rising names. If it is, it indicates that it is probably true that immigrants have less knowledge of fashion than the mainstream; but if it is not, it suggests that immigrants didn't have less knowledge of fashion in this particular setting. Table 2a shows the top 20 Jewish names in our dataset, and we indicate whether they were rising or declining in rank from 1880 to 1920. We determined whether the trend of a name--rising or declining--according to the following rule<sup>6</sup>: if the name is lower in rank than it is in 1920 in more than half of the years from 1880 to 1919, we regard the name as rising. Otherwise, the name is

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<sup>6</sup> We also tried some other rules, such as rank change between two particular years, e.g. between 1880 and 1920, or between 1900 and 1920, the results are consistent.

declining. Table 2a shows that majority of the Jewish popular names (12 out of 20, or 60%) were actually rising rather than declining in rank in whole population. Note e that top 5 names are all rising rather than declining. By comparison, only half of the top 20 names in whole population at 1920 were rising from 1880 to 1920 (table 2b).

[Table 2a and Table 2b are inserted here.]

It is possible that the top 20 of Jewish sample and the top 20 of whole population are not comparable, because it is less likely to observe a name to reach top ranks in a large population than in a small one, for in general there should be much more names available in the large population. In principle, if we randomly sample a small population from a large population, the very popular names and the relatively unpopular names are both likely to be under-represented in the small sample. As a result, the same number of very top names should occupy a smaller proportion of the small population than they do of the large population, and the same number of the moderate and less popular names should occupy a much larger proportion of the small population than of the large one. It is reasonable to expect the effect of size exists in our case. Thus, we try to control the effects of size when we compare the Jewish group with the whole population. A relatively simple way to do this is that if top X names occupy x% of whole population, we treat the top Y names which also occupy x% of Jewish sample as X's comparable group (Table 3).

[Table 3 is inserted here.]

Table 3 shows that the proportion of rising names in the same top M% names in the whole population and in Jewish sample. In general, the proportion in Jewish sample is slightly higher than that in whole population<sup>7</sup>. The scale of Jewish immigrants and their special

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<sup>7</sup> Table 3 shows that for about top 80% names (row one to row six) the proportion of rising names in Jewish sample is higher than that in whole population, while when we include more names (row 7 and row 8,

preferences to certain English names (Lieberson, 2000) might increase some names' popularity in the whole population, but overall, this factor can only account for a small portion of the rising names in Jewish sample. This is because, most of the rising names in Jewish sample are also the rising names in whole population, which suggests the rising names in Jewish group do not just reflect Jewish tastes. Second, Jewish immigrants cannot be solely responsible for the rise of these names in whole population, because the size of Jewish immigrants is not big enough to lead to the observed magnitude of rising. For example, *Robert*, *Harold* and *Jack*, respectively increase 2.382%, 1.148% and 0.699%<sup>8</sup> in the whole population from 1880 to 1920. Jewish immigrants occupy 0.2% (1880) -3% (1920) of whole population during that period. This means if all of the Jewish males use the same name, the percentage of this name in whole population will increase at most 3%<sup>9</sup>. Actually, according to our name data, it is very unlikely that a single name's percentage in a population goes beyond 10%<sup>10</sup>; in other words, if a name is extremely popular in Jewish population, its percentage in the whole population can be increased by a maximum of 0.3% by the Jewish immigrants. This is much less than the actual increase of *Robert*, etc. In addition, in the early nineteenth century, it is very unlikely that the mainstream will imitate the Jewish immigrants' tastes (Lieberson, 2000), thus the rising of these names in whole population should not be initiated by Jewish group.

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concentration>top80%) the proportion of rising names in whole population is slightly higher than that in the Jewish sample. This is because, as we show below, Jewish immigrants are apt to choose the older names which has existed in the population for a while and thus has been relatively popular than the natives who are more inclined to adopt newly popular names. Therefore, the relatively unpopular names in the whole population are more likely to be the novel names which are rising in the population, while the unpopular ones in the Jewish sample are more likely to be the declined names.

<sup>8</sup> From 1880 to 1920, the concentration of top names (e.g. top 20, 50, 100) decreased. Thus, if the concentration didn't change from 1880 to 1920, these names' percentage-increase would be even higher.

<sup>9</sup> The Jewish population of the United States in 1880 is 230,000-280,000, and it increased to 3,300,000-3,604,580 in 1920 (Jewish virtual Library, 2011). The population of the United States in 1920 is 106,021,537 (United States Census, 1920). The Jewish people occupied about 3%-3.4% of the whole population in 1920.

<sup>10</sup> According to our name data of the general population, the highest percentage of a name that ever appeared is 8.15%. The highest percentage of a name in our Jewish sample is 3.6%. Because our Jewish sample is small, we have the reason to believe that the highest percentage of a name in the larger Jewish population should be higher than 3.6%, but it is still unlikely bigger than, say, 10%.

In brief, the evidence suggests that Jewish parents, like most of their mainstream contemporaries, actually followed the rising fashion of the time. Such a result implies that, Jewish immigrants' knowledge of fashion is comparable to that of the mainstream on aggregate level. Of course, it is not necessary that every individual had the same level of knowledge. Then, what accounts for immigrants' lagging behind the mainstream, or, what is the exact difference between Jewish immigrants' behavior and mainstream's behavior in choosing popular names? By further exploring the data, we find that a lower proportion of rising names in Jewish sample were the names which were rarely used before 1880. In other words, Jewish immigrants prefer the names which had been known to the public before 1880 but whose popularity still increased in last decades.

Figure 5 shows the percentages of rising names (both within top 90% names) whose ranks were in different categories in 1880, in both whole population and Jewish sample. The results show that most of the rising names in Jewish sample were in rank higher than 500 in 1880, but most of the rising names in whole population were in rank lower than 500 in 1880. In other words, compared with those in whole population, the majority of the rising names in Jewish sample are much less novel.

[Figure 5 is inserted here.]

As a more concrete illustration, table 4 shows the distribution of the ranks in 1880 of all the rising names that reached top 100 in whole population around 1920 (between 1915 and 1925). They partly overlap the rising names in top 100 of Jewish sample; and in the table, the overlapped names are underlined. This table shows the rising names in Jewish sample mainly overlap with the rising names in whole population whose ranks are relatively high in 1880.

[Table 4 is inserted here.]

It is notable that our result doesn't suggest that immigrants only knew rising old names but had no idea about newer names; actually, because the "rising" or "declining" were determined in the pool of all names in whole population, immigrants had to be sufficiently aware of recent trends to know which name was rising or declining<sup>11</sup>. In other words, they should also have the idea about the rising, newer names. In sum, our results show that immigrants choose rising, old names, suggesting that lacking knowledge is not the major reason for the difference between immigrants' and the mainstream's adopting of names. Rather, immigrants' conservatism in naming mainly reflects their feelings of insecurity.

## Conclusion

The main goal of this paper is to clarify why, when they demonstrate the desire to assimilate, immigrants make conservative decisions which actually distinguish them from the mainstream. Our focus on this question was motivated by the problem that, although a powerful explanation --the feelings of insecurity prevents immigrants from acting exactly as the natives-- exists, it is very hard to prove it unless we disengage it from a straightforward, alternative explanation-- immigrants don't have the competency to be like natives, because they lack the knowledge of the latest trend. We chose Jewish immigrants around the early twentieth century (and their contemporary mainstream population) as our research cite because first, there was historical, great wave of immigrants entering into America within a relatively short period (1880-1920), which provides a unique chance for us to observe that immigrant conservatism is a

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<sup>11</sup> It is possible that not all Jewish immigrants knew newer, fashionable names of the whole population but only a small proportion of them did. These immigrants were the more assimilated ones and acted as the opinion leaders in the immigrant communities. The other immigrants imitated their tastes --it is worth pointing out that for most of the immigrants, the audiences of their adoption of mainstream names were mainly other immigrants rather than the native, for they wanted to show that they were superior to their peers as an assimilated American. Because these leading immigrants could feel insecurity in their membership, they were apt to adopt older names; as a result, the rest of the immigrants were only exposed to these older names. In particular, such a situation could be salient in 1920 because a large proportion of Jewish immigrants still lived in immigrant communities and obtained the knowledge of the host culture through personal contacts (broadcasting as public media hadn't been widely used by 1920 ).

significant social force; and Jewish immigrants was one of the two largest immigrant groups in the wave (the other is Italian) (Kessner, 1977; Alexander, 2009). Moreover, because an important part of examining the argument is to exclude the possibility of ethnic maintenance, Jewish group has particular advantages for such a purpose. Besides that Hebrew names achieve the function of maintaining tradition as we mention above, an additional advantage is that, compared with other ethnic groups (e.g. Italians) a considerable number of which went back to home country after earned some money in America, almost all Jews stayed in America due to persecution; as a result, in general Jewish immigrants have very strong desire to assimilate in American society in every aspect including economic, cultural and political (Kessner, 1977; Lieberman, 1980). In addition, Jewish immigrants moved from the very bottom of the society upon arriving to the middle or even higher social strata rather fast, e.g. in New York 37% of the immigrants arrived in 1880 rose out of the manual class within the same decade (Kessner, 1977). This accords with our prediction that feelings of insecurity was most prominent when immigrants economically broke with the lower class and had been socially entering mainstream. Our analytical strategy is based on the argument that the popularity of a cultural practice has symbolic value, and people's tastes for popularity reflect the identities that they want to convey (Lieberman, 2000; Obukhova, Zuckerman and Zhang, 2011). Our strategy emphasizes that not only popularity influences symbolic meaning but also how popularity changes along time does (see also Berger and Le Mens, 2009). We determine whether a name is "old" and "new" and whether is "rising" and "declining" according to its historical level of popularity and the change of its popularity. Corresponding to persons, whether a person is able to distinguish "rising" and "declining" reflects whether she knows the current fashion trend; and whether she chooses old (new) names reflects whether she is insecure (secure) in membership. Therefore, we generate



four categories shown in table 1. Our results show that Jewish immigrants are conformists who have the knowledge of fashion but choose older names. Because we don't measure the feelings of insecurity, we can say only that our results are consistent with the feelings of insecurity explanation, and that there is strong evidence supporting that lack of cultural capital is not the only reason that leads to immigrant conservatism, and also their failure to assimilate. Our results have important implication for the cultural integration of immigrants and the integration of groups that are at the edge in other social contexts.

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## Tables

Table 1. Two by two table for names' categories

New, rising names favored by fashion-seekers	Old, rising names favored by conformists
New, falling names “unsuccessful names”, favored by nobody	Old, falling names adopted by “greenhorn”

Table 2a. Rank changes of top 20 Jewish male names

Top 20 in Jewish Population		Trend to <b>1920</b> in whole population	Rank in Whole Population				
			1880	1890	1900	1910	<b>1920</b>
1	Robert	<b>Rising</b>	10	8	6	4	3
2	David	<b>Rising</b>	18	26	32	30	25
3	Harold	<b>Rising</b>	116	47	20	18	12
4	Bernard	<b>Rising</b>	97	98	86	61	46
5	Jack	<b>Rising</b>	77	53	27	23	20
6	Harry	Declining	12	10	13	16	21
7	Joseph	Declining	7	7	7	6	7
8	Sidney	Declining	96	100	108	93	107
9	Irving	<b>Rising</b>	203	193	185	118	116
10	Morris	<b>Rising</b>	172	152	136	91	109
11	Sam	Declining	36	41	34	39	84
12	William	<b>Rising</b>	2	2	2	3	2
13	Samuel	Declining	17	20	33	32	44
14	Albert	Declining	16	16	16	14	19
15	Jerome	<b>Rising</b>	229	205	214	159	126
16	Louis	Declining	19	19	26	24	28
17	Edward	<b>Rising</b>	11	11	9	9	8
18	Milton	<b>Rising</b>	91	119	98	76	74
19	Norman	<b>Rising</b>	133	108	83	64	47
20	Arthur	Declining	14	14	15	17	18

Table 2b. Rank changes of top 20 names in whole population

Top 20 in 1920 whole population							
Rank	Names	Trend to 1920	1880	1890	1900	1910	1920
1	John	Constant	1	1	1	1	1
2	William	<b>Rising</b>	2	2	2	3	2
3	Robert	<b>Rising</b>	10	8	6	4	3
4	James	Declining	3	3	3	2	4
5	Charles	<b>Rising</b>	4	5	5	7	5
6	George	Declining	5	4	4	5	6
7	Joseph	Declining	7	7	7	6	7
8	Edward	<b>Rising</b>	11	11	9	9	8
9	Frank	Declining	6	6	8	8	9
10	Richard	<b>Rising</b>	23	25	24	21	10
11	Thomas	Declining	8	12	11	12	11
12	Harold	<b>Rising</b>	116	47	20	18	12
13	Walter	Declining	13	13	12	13	13
14	Paul	<b>Rising</b>	60	31	19	15	14
15	Raymond	<b>Rising</b>	87	36	23	19	15
16	Donald	<b>Rising</b>	246	131	79	44	16
17	Henry	Declining	9	9	10	10	17
18	Arthur	Declining	14	14	15	17	18
19	Albert	Declining	16	16	16	14	19
20	Jack	<b>Rising</b>	77	53	27	23	20

Table 3. Proportion of rising names in Top M% names

Top X in whole populat ion	Top M% (concentration of Top X)	Number of rising names	Proportion of rising names	Top Y in Jewish sample	Top M% (concentration of Top X)	Number of rising names	Proporti on of rising names
10	31%	5	0.50	14	31%	8	0.57
20	41%	10	0.50	21	41%	12	0.57
25	45%	14	0.56	24	46%	15	0.63
50	58%	26	0.52	36	58%	23	0.64
100	70%	55	0.55	54	70%	32	0.59
200	79%	116	0.58	76	79%	46	0.61
350	85%	204	0.58	100	85%	55	0.55
500	88%	296	0.59	120	88%	65	0.54



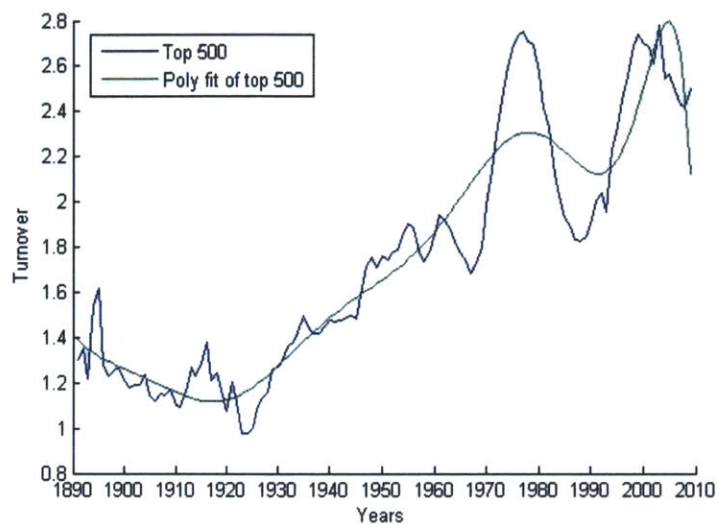
Table 4 The names which had been rising since 1880 and reached top 100 around 1920 in whole population.

Familiar Names				Fashionable Names	
Rank <20 in 1880	Rank 20-100 in 1880	Rank 100-200 in 1880	Rank 200-500 in 1880	Rank 500-1000 in 1880	Rank >1000 in 1880
Overlap: 100%	Overlap: 85%	Overlap: 39%	Overlap: 30%	Overlap: 20%	Overlap: 10%
<u>William</u>	<u>Richard</u>	<u>Harold</u>	<u>Donald</u>	<u>Gerald</u>	Bobby
<u>Robert</u>	<u>Paul</u>	Anthony	Kenneth	Billy	Dewey
<u>Charles</u>	<u>Raymond</u>	<u>Norman</u>	<u>Vernon</u>	Don	Woodrow
<u>David</u>	<u>Jack</u>	Russell	Vincent	Gene	Dale
<u>Edward</u>	<u>Ralph</u>	<u>Melvin</u>	<u>Cecil</u>	Douglas	Ronald
	<u>Howard</u>	Leroy	Glenn		
	<u>Carl</u>	Lloyd	<u>Gordon</u>		
	<u>Eugene</u>	Clifford	Wayne		
	Earl	<u>Marvin</u>	<u>Arnold</u>		
	Francis	<u>Lester</u>	Johnnie		
	<u>Lawrence</u>	<u>Leon</u>			
	<u>Leonard</u>	<u>Alvin</u>			
	<u>Stanley</u>	Victor			
	<u>Bernard</u>	Willard			
	<u>Leo</u>	Wallace			
	<u>Edwin</u>	Everett			
	Chester	Gilbert			
	<u>Theodore</u>	Wilbur			
	<u>Philip</u>				
	<u>Milton</u>				

*Note: The names are put into different columns according to their ranks in 1880. The names which are also in top 100 of Jewish soldiers' names are underlined. The "overlap" showed in a column indicates the percentage of the underlined names (which are in the top 100 of both the whole population and the Jewish sample) in the names within the column.*

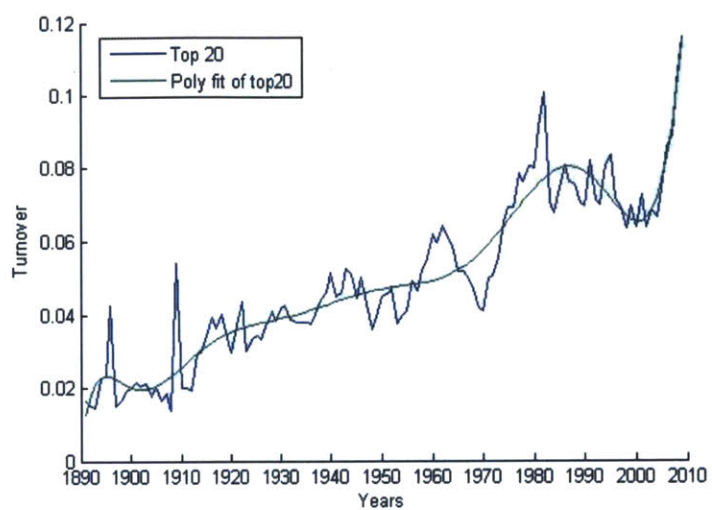
## Figures

Figure 1. Adjusted name turnover of the top 500 American male names



*Note: Turnover indicates the extent to which a group of names changes from one year to a later year (Lieberson, 2000). Appendix A shows more information about how turnover is calculated. The value reported for each year represents the value for the immediately preceding 10-year period.*

Figure 2. Adjusted name turnover of the top 20 American male names



*Note: The value reported for each year represents the value for the immediately preceding 10-year period*

Figure 3. Fashion change in two conditions: prefer older and not

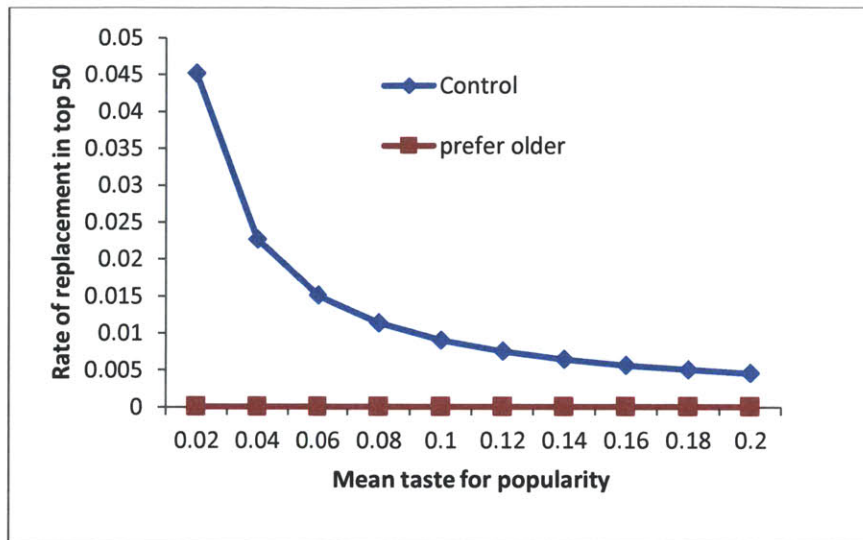
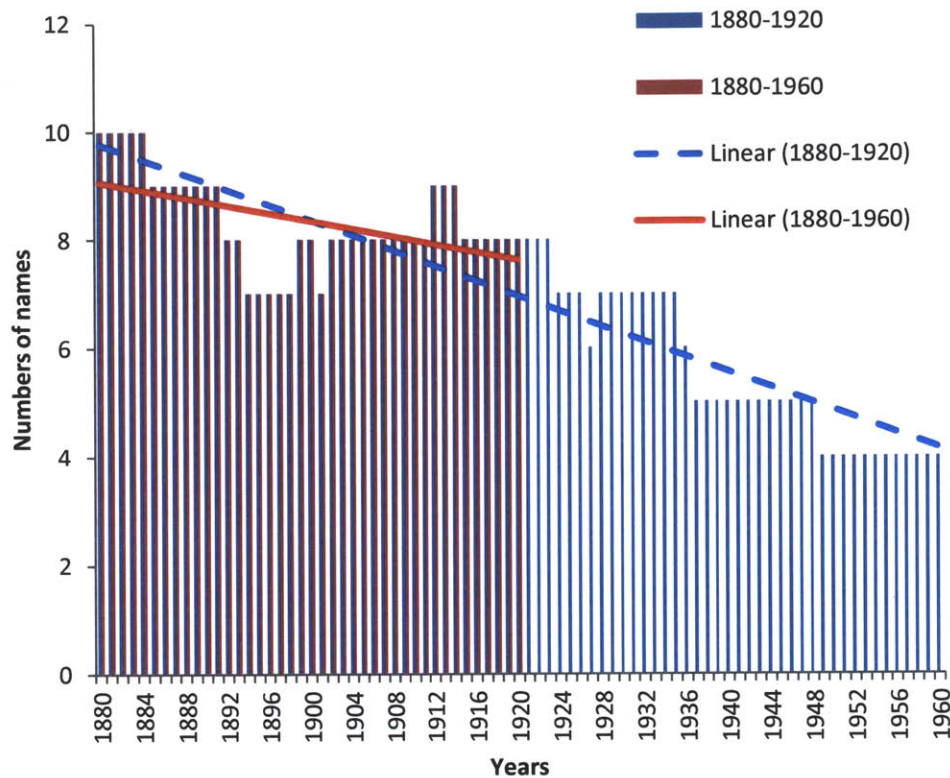
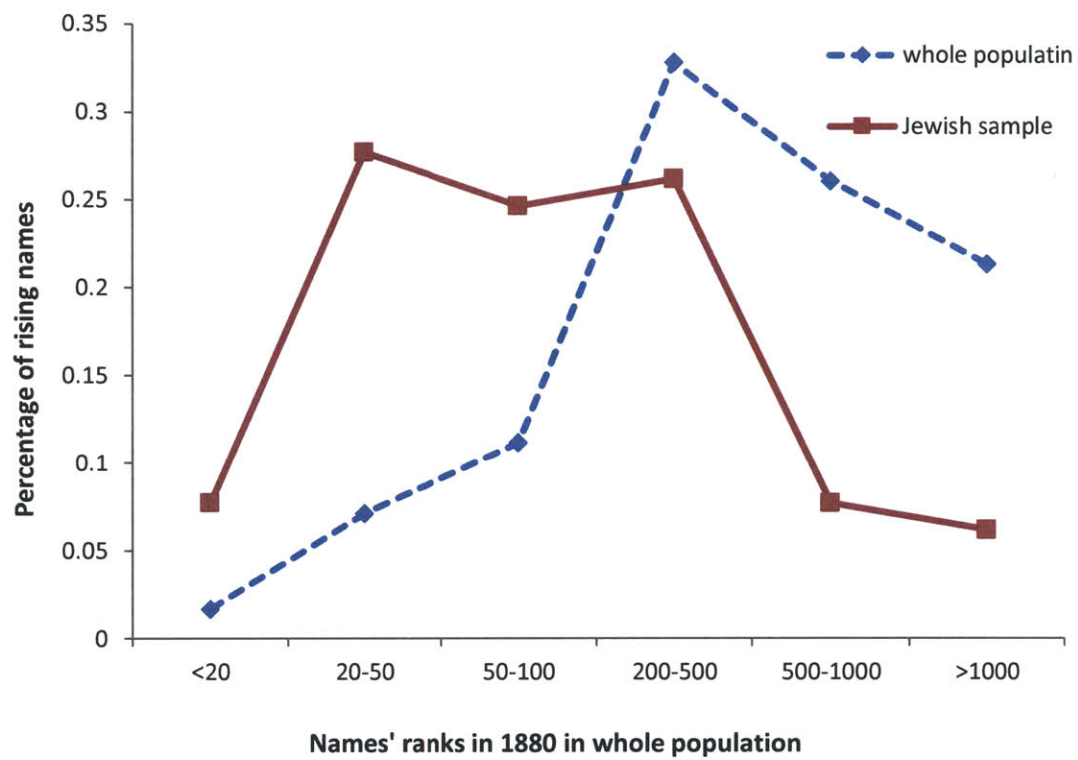


Figure 4. The overlap in the top 20 names between Jewish WWII Soldiers and the national population



*Note: Each bar at a specific year indicates the number of names used by both Jewish soldiers who were born around 1920 and the general population who were born in that year. The solid line is the trend-line ( $y=bx+a$ ) of the number of the same names between 1880 and 1920. The coefficient of the linear fitting is  $-.037$ . T test of the coefficient ( $t=-3.45$  and  $p<0.001$ ) shows the decline in the number of the same names between 1880 and 1920 is significant. Similarly, the dashed line is the trend-line of the number of the same names between 1880 and 1960. The coefficient of the linear fitting is  $-.070$  and  $t=-18.42$  ( $p<0.000$ ).*

Figure 5. The distribution of the 1880 ranks of rising names, whole population and Jewish sample



## **Appendix. Adjusted turnover**

The speed of change in names is indicated by *name turnover*, which reflects the extent of replacement in top names from one time to another (Lieberson, 2000; Lieberson and Lynn, 2003). Lieberson measures name turnover between two time points in two steps: first, calculating each name's difference in percentages between the two time points. Second, sum these differences. This value reflects the aggregate of the changes in the top names' proportions (see Lieberson and Lynn, 2003, pp 264). However, we found two nontrivial problems in Lieberson's measurement of name turnover.

### *Problems in Lieberson's measurement and our solutions*

- Control concentration change

Assume we want to know the trend of name turnover of top X names for a long time period. One basic fact is that, the total proportion of the top X names, or the concentration of the top X names, is not constant from one year to another (Lieberson, 2000; Lieberson and Lynn, 2003). If the concentration is not constant, by using Lieberson's method we can get a biased result of turnover.

The following example demonstrates the problem in the measurement of turnover if the concentration of top X names is not constant. Assume that we want to calculate the name turnover of the top three names between year A and year B. The three names in order are David, John and Michael. At year B their ranks change to John, Michael and David. At year A the three names together occupy 85% of the total population, i.e. the concentration of the three names is 85%. We compare the value of name turnover in three conditions: 1) the concentration at year B is the same as the concentration at year A; 2) the concentration at year B is larger than the concentration at year A; 3) the concentration at year B is smaller than the concentration at year A. Table A-1 to A-3 show that, although the rank change of names is the same in the three

conditions, the turnover is not the same—it is magnified by the increase of concentration and reduced by the decrease of concentration.

[Table A-1, A-2, A-3 are inserted here]

We correct the concentration problem in the following way. An ideal measurement of turnover is only determined by how names replace each other in the rank. However, the rank changes of top names should have more weight on turnover than those of the less top names. Hence, we assign proper weights to different ranks, regardless of the names which occupy the rank. The weights are determined in the following steps: first, we get a distribution by fitting the real distribution of names' percentage. Second, we use a Generalized Pareto Distribution to fit this real distribution. When calculating the turnover, we use this Generalized Pareto Distribution instead of the names' real percentages for each year. Figure A-1a and A-1b demonstrate the name turnover of the top 500 American male first names both by Lieberman's method and by our method.

[Figure A-1a and A-1b are inserted here]

- Search Range

The second problem emerges when, as is typically the case, the full name distribution is not available and researchers must rely on a list of top  $X$  names. The name data on the national level that we get from governmental offices, e.g. the Social Security Department of US, are the statistical results for a certain number of top names (e.g. top one thousand) with their percentages for each time point (usually, each year) within a certain period. Let's use  $S$  to indicate the number of top names for each year and  $N$  to indicate the total number of years, so the size of the dataset is  $S*N$ . Assume that we want to know the name turnover of the top  $X$  names between two time-points. Obviously,  $S$  must be no less than  $X$ . Moreover, because some names in the top



X at time point1 may drop out of top X at point2, so if S is not big enough, we may not know these names' percentages at point 2. The following example demonstrates how the value of turnover can be distorted if we don't have a big enough dataset. Similarly as the previous section, assume that we want to calculate the name turnover of top three names between year A and year B. And we only have the data for top three names for both of the years. The top three names at year A are David, John and Michael in order. However, at year B Michael does not rank the third any longer and James becomes the third. As a result, we don't know the Michael's percentage at year B. We can treat the Michael's percentage at year B as 0, or let it equal the smallest percentage that we know (i.e. the percentage of the 3<sup>rd</sup> name--James). Table 3-7 shows the turnover we obtain in both the conditions. Assume that Michael's real percentage at year B is 3%. Table 3-8 shows the actual value of turnover.

[Table A-4 and Table A-5 are inserted here]

Although treating the percentages which we don't know as zero, or let them equal the smallest percentage that we know (i.e. the percentage of the X<sup>th</sup> name) make us know the upper and lower bounds of the name turnover of the top X names, such a way is not sufficient for judging the precision of our results. And more important, it can also mislead our judgment about the trend of change in turnover.

Our solution for the problem is that, for a particular population, if we want to know the turnover of the top X names, we can determine the “minimal unbiased search range”--Y, which guarantees that the trend of turnover we get is not misleading.

We develop a program to determine the “minimal unbiased search range” in the following way: for top X names, we try a series of search range  $Z_1, Z_2 \dots Z_n$ ;  $Z_1 = X$  and  $Z_{i+1} = Z_i + \beta$  ( $\beta$  is an increment),  $Z_n \leq S$ . In our simulations,  $\beta = 1$ . For each search range, we will get a curve

which represents the trend of turnover within the period. We try to find the minimal  $i$  which meets the following criterion: the Euclidean distance<sup>12</sup> between the curve generated by  $Z_i$  and any of the curves generated by  $Z_j$  ( $i < j \leq n$ ) equals zero, or is less than a very small value (e.g. 0.01). This minimal  $i$  is the minimal search range for top  $X$  names which guarantees that the turnover curves we get won't mislead our judgment.

For our data of the American male first names, we found that top 1000 names is solidly enough for calculating the turnover of about top 500 names which occupy more than 75% of the whole population. Figure A-2 shows the maximal number of top names can be searched within a certain search range.

[Figure A-2 is inserted here]

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<sup>12</sup> Euclidean distance between two curves which are represented by vectors--( $p_1, p_2, p_3 \dots p_n$ ) and ( $q_1, q_2, q_3 \dots q_n$ )-- is  $\sqrt{(p_1 - q_1)^2 + (p_2 - q_2)^2 + \dots + (p_n - q_n)^2}$ .

## Tables

Table A-1 Influence of concentration change on name turnover, condition 1: concentration is constant from Year A to Year B

Year A			Year B			Differences between percentage in 1900 and percentage in 1910 $ \Delta\% $
Name	Rank	Percentage	Name	Rank	Percentage	
David	1	60%	David	3	5%	0.55
John	2	20%	John	1	60%	0.40
Michael	3	5%	Michael	2	20%	0.15
Concentration		85%	concentration		85%	Sum(name turnover): 1.10

Table A-2 Influence of concentration change on name turnover, condition 2: concentration increases from Year A to Year B

Year A			Year B			Differences between percentage in 1900 and percentage in 1910 $ \Delta\% $
Name	Rank	Percentage	Name	Rank	Percentage	
David	1	60%	David	3	5%	0.55
John	2	20%	John	1	70%	0.50
Michael	3	5%	Michael	2	20%	0.15
Concentration		85%	concentration		95%	Sum(name turnover): 1.20

Table A-3 Influence of concentration change on name turnover, condition 3: concentration decreases from Year A to Year B

Year A			Year B			Differences between percentage in 1900 and percentage in 1910 $ \Delta\% $
Name	Rank	Percentage	Name	Rank	Percentage	
David	1	60%	David	3	10%	0.50
John	2	20%	John	1	50%	0.30
Michael	3	5%	Michael	2	15%	0.10
Concentration		85%	concentration		75%	Sum(name turnover): 0.9

Table A-4 Influence of search range on name turnover, condition 1: not big enough search range  
(search range=3)

Year A			Year B			Differences between percentage at Year A and percentage at Year B $ \Delta\% $		
Name	Rank	Percentage	Name	Rank	Percentage		Treat Michael's percentage at Year B as 0	Treat Michael's percentage at Year B as 15%
David	1	60%	David	1	60%	David	$ 0.6-0.6 =0$	$ 0.6-0.6 =0$
John	2	20%	John	2	20%	John	$ 0.2-0.2 =0$	$ 0.2-0.2 =0$
Michael	3	15%	James	3	15%	Michael	$ 0.15-0 =0.15$	$ 0.15-0.15 =0$
			...				Sum(name turnover):0.1 5(biased)	Sum(name turnover):0(biased)
			Michael	n	3%			

Table A-5 Influence of search range on name turnover, condition 2: big enough search range  
(search range=n)

Year A			Year B			Differences between percentage at Year A and percentage at Year B $ \Delta\% $	
Name	Rank	Percentage	Name	Rank	Percentage		
David	1	60%	David	1	60%	David	$ 0.6-0.6 =0$
John	2	20%	John	2	20%	John	$ 0.2-0.2 =0$
Michael	3	15%	James	3	15%	Michael	$ 0.15-0.03 =0.12$
			...				Sum(name turnover):0.12(unbiased)
			Michael	n	3%		

## Figures

Figure A-1a The name turnover of the top 500 American male names, by Lieberman's measurement

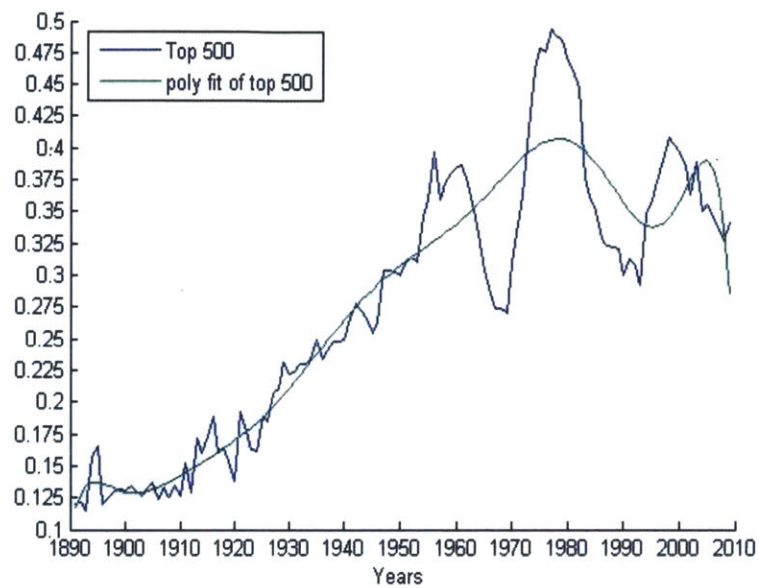




Figure A-1b. The name turnover of the top 500 American male names, the change of concentration is controlled

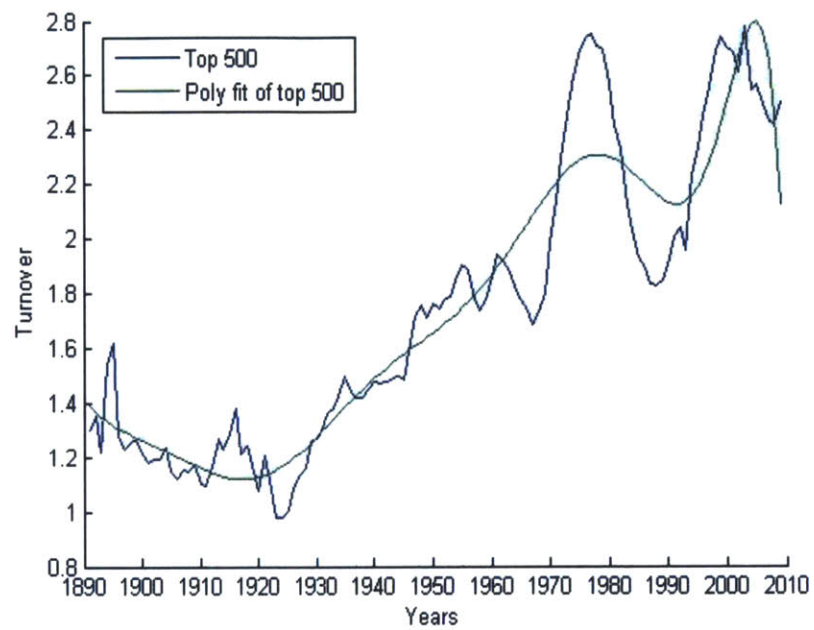


Figure A-2. The maximal number of top names can be searched within a certain search range

